

## WHAT IS CLAIMED IS:

1. A connector comprising a plurality of contact arrays parallel to one another, each of said contact arrays including two signal contacts adjacent to each other and a ground contact aligned with said signal contacts, said ground contact in each contact array being disposed at a position corresponding to an intermediate position between two signal contacts adjacent to each other in a next contact array.

2. The connector according to claim 1, wherein said signal contacts in one contact array and said ground contacts in another contact array adjacent to the one contact array are arranged in a staggered fashion.

3. The connector according to claim 1, wherein, in each contact array, said ground contact is arranged adjacent to said signal contact.

4. The connector according to claim 1, wherein each of said signal contacts has a signal terminal portion, each of said ground contacts having a ground terminal portion, said signal terminal portions and said ground terminal portions being arranged in a single common array.

5. The connector according to claim 4, wherein said ground terminal portion is arranged between adjacent ones of said signal terminal portions.

6. A connector comprising first and second contact arrays parallel to each other and a third contact array between said first and said second contact arrays, each of said first and said second contact arrays including a plurality of signal contacts, said third contact array including a plurality of ground contacts, each of said ground contacts being disposed at a position corresponding to an intermediate position between every adjacent ones of said signal contacts in each of said first and said second contact arrays.

7. The connector according to claim 1, wherein said ground contacts and said signal contacts in each of said first and said second contact arrays are

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arranged in a staggered fashion.

8. The connector according to claim 6, wherein said first, said second, and said third contact arrays are arranged in a single common plane.

9. The connector according to claim 6, wherein each of said signal contacts has a signal terminal portion, each of said ground contacts having a ground terminal portion, said signal terminal portions and said ground terminal portions being arranged in a single common array.

10. The connector according to claim 8, wherein said ground terminal portion is arranged between adjacent ones of said signal terminal portions.

11. A connector for high-speed differential signal transmission, said connector comprising:

a plurality of + signal contacts;

a plurality of - signal contacts; and

a plurality of ground contacts, said contacts being arranged in a manner such that a set of each single one of said + signal contacts, each single one of said - signal contacts, and each single one of said ground contacts are located at three apexes of an isosceles triangle, respectively.

12. The connector according to claim 11, wherein a plurality of said isosceles triangles are defined, bottom sides of said isosceles triangles being alternately arranged in a staggered fashion.

13. The connector according to claim 11, said connector being for use in high-speed differential signal transmission according to the TMD5 standard.

14. The connector according to claim 11, wherein said + signal contacts, said - signal contacts, and said ground contacts are arranged at a predetermined pitch, a plurality of transmission cables being arranged utilizing spaces faced to said ground contacts, each of said transmission cables being connected to one of said + signal contact and said - signal contact.

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15. The connector according to claim 14, wherein said transmission cable is one of a twisted shield cable and a coaxial cable.

16. The connector according to claim 11, further including a printed board on which said + signal contacts, said - signal contacts, and said ground contacts are arranged in a single array and surface-mounted.

17. The connector according to claim 11, wherein said ground contact is arranged between said + signal contact and said - signal contact.

18. The connector according to claim 12, further including a printed board provided with through-holes formed in three arrays at positions where said + signal contacts, said - signal contacts, and said ground contacts are mounted, said ground contacts being arranged in said through holes in the middle array.

19. The connector according to claim 15, wherein said transmission cable is said twisted shield cable, said connector comprising an upper-array ground plate and a lower-array ground plate each of which is connected to a shield portion of said twisted shield cable, each of said upper-array and said lower-array ground plates having lead portions to be contacted with or soldered to said ground contacts, said upper-array and said lower-array ground plates being faced to each other, said lead portions being alternately arranged and connected to said ground contacts located at the apexes of said isosceles triangles.

20. The connector according to claim 13, wherein said shield portion of said twisted shield cable is surrounded by said ground plate on left, right, and lower sides and by said shield plate on an upper side.

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